

REMARKS

Claims 1-32 are pending in this application. Claim 12 has been amended to provide proper antecedent basis for the terms of the claims. Please find enclosed a replacement Abstract. The Abstract has been amended to remove the objectionable term – “is also described” – as requested by Examiner. Applicants respectfully request reconsideration, withdrawal of all claim rejections and objections, and allowance of all remaining claims.

Claim Rejections – 35 § U.S.C. 102

On page 2 of the Office Action mailed on December 13, 2005, the Examiner states:

Claims 1-32 are rejected under 35 U.S.C. § 102(e) as being anticipated by US 6,679,336.

Applicants respectfully traverse the rejection of claims 1-32 under 35 USC § 102. As discussed below, U.S. 6,679,336 granted to Musselwhite et al. (“Musselwhite”) fails to teach each and every element of the rejected claims as amended. Such rejection under §102 for anticipation requires that the single reference teach each and every element or step of the rejected claim. *See Atlas Powder v. E.I. DuPont*, 750 F.2d 1569 (224 USPQ 409) (Fed. Cir. 1984); *See also* MPEP § 2131.01 (“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference”). Examiner’s rejections under §102 fail to meet this test.

Musselwhite does not teach an apparatus or a method that is even remotely similar in operation or construction to the presently claimed apparatus and method. With reference to claim 1, for example, Musselwhite fails to teach various claimed elements including: a drill string, a bit assembly at the drill string's distal end, an axially extending port and a liner engaging surface. In particular, Musselwhite teaches a completion string rather than a drill string.

Furthermore, Musselwhite does not teach a bit assembly as an integral part of the apparatus but rather vaguely mentions at column 6, line 62, that a drill bit *could* be used to drill the apparatus out from the completion string. This most certainly is not a reference to a complete apparatus including a bit assembly. As noted, Musselwhite also does not teach an axially extending port as presently claimed. The examiner has alleged that port 30 of Musselwhite is an axially extending port, but this port clearly does not extend from an upper surface to a lower surface, especially since the Examiner is later alleging that a nearly identical port 33 defines the presently claimed lateral port. Finally, Musselwhite simply does not teach a liner engaging surface formed to releasably secure a borehole liner such that the drill string extends through the borehole liner.

With respect to claim 2, Musselwhite does not teach the borehole drilling apparatus as in claim 1 further comprising a seal extending about the sub operable to create a seal between the upper surface and the liner engaging surface.

With respect to claim 3, Musselwhite does not teach the borehole drilling apparatus as in claim 2 wherein the seal extends about the ported sub to be operable to seal against fluid communication between the axially extending port and the lateral port.

With respect to claim 4, Musselwhite does not teach the borehole drilling apparatus as in claim 3 wherein the lateral port opens between the liner engaging surface and the seal.

With respect to claim 5, Musselwhite does not teach the borehole drilling apparatus as in claim 3 wherein the lateral port opens at the liner engaging surface.

With respect to claim 6, Musselwhite does not teach the borehole drilling apparatus as in claim 1 wherein the lateral port opens at the liner engaging surface.

With respect to claim 7, Musselwhite does not teach the borehole drilling apparatus as in claim 1 wherein the lateral port has a flow volume less than that of the bore such that a lesser fluid flow volume passes through the lateral port than the bore.

With respect to claim 8, Musselwhite does not teach the borehole drilling apparatus as in claim 1 further comprising a valve to control fluid flow through the lateral port.

With respect to claim 9, Musselwhite does not teach the borehole drilling apparatus as in claim 1 wherein the sub further includes a passage opening from the drill string center bore to provide fluid communication with a liner hanger setting component.

With respect to claim 10, Musselwhite does not teach the borehole drilling apparatus as in claim 9 wherein the liner hanger setting component is integral with the sub.

With respect to claim 11, Musselwhite does not teach the borehole drilling apparatus as in claim 9 wherein the sub further includes a valve in the bore, which is closeable to divert fluid pressure to the liner hanger setting component.

With respect to claim 12, Musselwhite does not teach an apparatus including, at the very least, a drill string or a bit assembly.

With respect to claim 13, Musselwhite does not teach the apparatus of claim 12 wherein the drill string is connected by threaded connections into the bore of the ported sub.

With respect to claim 14, Musselwhite does not teach the apparatus of claim 12 wherein the seal extends about the ported sub to seal about the ported sub against fluid communication between the axially extending port and the lateral port.

With respect to claim 15, Musselwhite does not teach the apparatus as in claim 12 wherein the lateral port has a flow volume less than that of the bore such that a lesser fluid flow volume passes through the lateral port than the bore.

With respect to claim 16, Musselwhite does not teach the apparatus as in claim 12 further comprising a valve to control fluid flow through the lateral port.

With respect to claim 17, Musselwhite does not teach the apparatus as in claim 12 wherein the sub further includes a passage opening from the drill string center bore to provide fluid communication with a liner hanger setting component.

With respect to claim 18, Musselwhite does not teach the apparatus as in claim 17 wherein the liner hanger setting component is integral with the sub.

With respect to claim 19, Musselwhite does not teach the apparatus as in claim 17 wherein the sub further includes a valve in the bore, which is closeable to divert fluid pressure to the liner hanger setting component.

With respect to claim 20, Musselwhite does not teach the apparatus as in claim 19 wherein the valve includes a seat to be sealed by a ball launchable from above the valve and the ball and seat are selected to be selectively openable to reopen the bore.

With respect to claim 21, Musselwhite does not teach the apparatus as in claim 19 wherein the passage is positioned above the valve and the valve is positioned above the lateral port.

With respect to claim 22, Musselwhite does not teach the apparatus of claim 12 wherein the seal is mounted on the ported sub.

With respect to claim 23, Musselwhite does not teach the apparatus of claim 12 wherein the seal is mounted about the liner.

With respect to claim 24, Musselwhite does not teach the apparatus of claim 12 further comprising a drill string bore valve in the drill string between the ported sub and the bit assembly.

With respect to claim 25, Musselwhite does not teach the apparatus of claim 12 further comprising a tubing wall valve openable to form an opening through the drill string wall between the ported sub and the bit assembly.

With respect to claim 26, Musselwhite does not teach a method for drilling a borehole including at least the step of operating a bit assembly to proceed with drilling the borehole.

With respect to claim 27, Musselwhite does not teach the method of claim 26 wherein the drilling fluid is circulated down through the second annular space from a port extending from the drill string that opens into the second annular space.

With respect to claim 28, Musselwhite does not teach the method of claim 26 wherein after a selected depth is reached, the method further comprises hanging the liner in the borehole, disconnecting the drill string from the liner and pulling the drill string to surface, leaving the liner in the borehole.

With respect to claim 29, Musselwhite does not teach the method of claim 28 the method further comprising inserting a cementing string and pumping cement through the cementing string to fill the second annular space.

With respect to claim 30, Musselwhite does not teach the method of claim 26 wherein after a selected depth is reached, the method further comprises pumping cement down through the second annular space and up through the annular space between the drill string and the liner.

With respect to claim 31, Musselwhite does not teach the method of claim 30 further comprising hoisting the drill string such that the bit assembly is positioned above the liner shoe and circulating fluid through the drill string to clear cement from the drill string.

With respect to claim 32, Musselwhite does not teach the method of claim 26 further comprising providing a ported sub mounted on the drill string, the ported sub including an upper surface, a lower surface, a bore extending from the upper surface to the lower surface to which the drill string is connected such that the bore is in communication with the drill string center bore, an axially extending port for providing fluid communication between the lower surface and the upper surface but isolated from fluid communication with the bore; and a liner engaging surface encircling the lower surface, the liner engaging surface formed to releasably engage the liner for hanging on the drill string.

In light of the above, Applicants respectfully request that the Examiner withdraw the rejection of Claims 1 through 32 under 35 USC § 102.

CONCLUSION

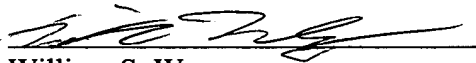
In light of the amendments and/or the arguments made by Applicants above, Applicants submit that all existing claims are now in a condition for allowance. Applicants respectfully request that Examiner withdraw all objections and rejections with regard to the above-referenced claims in reliance on one or more of the grounds submitted by Applicants.

If there are any outstanding issues that the Examiner feels may be resolved by way of telephone conference, the Examiner is invited to call Colin Cahoon or William Wang at the below-listed telephone number if in the opinion of the examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

The Commissioner is hereby authorized to charge any payments that may be due or credit any overpayments to CARSTENS & CAHOON, LLP Deposit Account 50-0392.

Respectfully submitted by:

Dated: April 13, 2006



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